

SPOTLIGHT on Massachusetts



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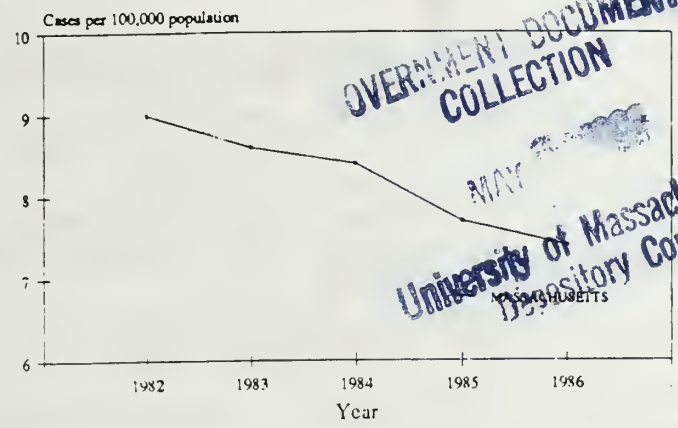
INFORMATION FOR PRIMARY CARE PHYSICIANS

Massachusetts Department of Public Health

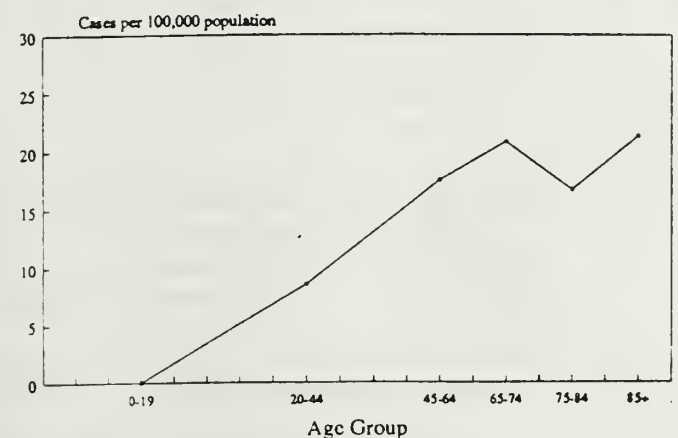
A Publication of the
Cancer Control Office

Cervical Cancer and Pap Smear

CERVICAL CANCER
Trends in Massachusetts



RATE OF CERVICAL CANCER BY AGE
Massachusetts Females, 1982-1986



Source: Bureau of Health Statistics, Research and Evaluation



INCIDENCE IN
MASSACHUSETTS

- The incidence of cervical cancer in Massachusetts declined 18% from 9.0 in 1982 to 7.4 in 1986.
- During this period, 1,494 new cases of invasive cervical cancer were reported to the Massachusetts Cancer Registry, accounting for 2% of cancers newly diagnosed in females.
- The age-specific rates for cervical cancer increase with age and peak at age 65 and above.
- The average annual age-adjusted incidence rate for all Massachusetts females from 1982 through 1986 was 8 per 100,000.

RISK FACTORS



- The major risk factors for cervical cancer are
 - having sex before the age of 18,
 - multiple sex partners, and
 - exposure to STDs such as condyloma, Herpes Simplex Type II, and papilloma viruses (genital warts).

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January 1991



PAP SMEAR

- Early detection by regular pelvic examination and Pap smear could make cervical cancer a completely curable disease.
- Pap smears can reduce mortality. In fact, the decline in cervical cancer mortality in the 1970s and 1980s is attributed to the widespread use of the Pap smear.
- In 1988, a new system of reporting Pap smear results was developed, the Bethesda system. This new system uses specific, descriptive diagnoses rather than class numbers (1 to 5) to report results. It also includes an evaluation of the adequacy of the smear thereby reducing the likelihood of a false-negative result from an insufficient sample. For more information about the Bethesda system, call the Cancer Information Service or the American Cancer Society.

1988 Massachusetts Physician Survey

- 84% of Massachusetts physicians surveyed stated that they perform Pap smears at least every three years on adult female patients. By specialty, nearly 100% of OB/GYN physicians, 86% of internists, and 83% of general practitioners and family physicians do so.

1988 Mass. Health Interview Survey

- 51% of adult women surveyed reported having had a Pap smear within the past year, 25% one to two years ago, 17% more than two years ago, and 7% had never had a Pap smear.
- Among women age 40 and above, those who received a Pap smear within the past year declined to 42%, compared to 59% for women age 18 to 39.

- 37% of women of lower household incomes (<\$15,000) reported having had a Pap smear within the past year, compared to 56% of women of higher household incomes (>\$15,000).
- 41% of women with a high school education or less reported having had a Pap smear, compared to 60% of women with some college education or more.



YOU CAN MAKE THE DIFFERENCE

- Advise patients to make an appointment:
 - if they notice bleeding after sex, bleeding between periods, or unusual discharge from the vagina,
 - for an annual Pap smear if they are at risk and asymptomatic,
 - for a Pap smear on a regular basis if they are sexually active or over 17 years old, at average risk and asymptomatic,
 - to evaluate the need for a Pap smear if they have had a hysterectomy or are no longer sexually active, are at average risk, and asymptomatic.
- Advise patients to talk with their partners about using condoms. Condoms will help to protect them from sexually transmitted diseases which are linked with cervical cancer
- If your patients smoke, advise them to quit. Smoking appears to increase the risk for cervical cancer.

Call for free professional and patient education materials.

- *Massachusetts Division
American Cancer Society*
1-800-ACS-2345
- *The National Cancer Institute
Cancer Information Service*
1-800-4-CANCER
- *The Massachusetts Department
of Public Health
Cancer Control Program*
(617) 727-2662



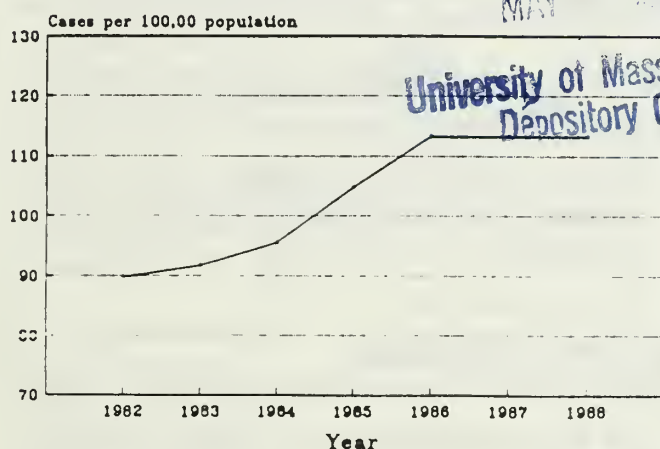
SPOTLIGHT on Massachusetts Information for Primary Care Physicians

Breast Cancer & Mammography

Incidence in Massachusetts

- Breast cancer is the most common cancer in women.
- 27,837 new cases were reported in the state from 1982 through 1988, accounting for 30.1% of all cancers newly diagnosed in women.
- In 1989, 1,214 women in Massachusetts died from breast cancer.

Figure 1.
Breast Cancer in Females
Trend in Massachusetts



Rates are age-adjusted to the 1970 U.S. standard population
Source: Bureau of Health Statistics

Risk Factors

- Approximately 1 in 9 women will develop breast cancer in her lifetime. Of these women, 1 in 3 will die from this disease.
- Some women are at higher risk for developing breast cancer than others. These are women who:

- have a family history of breast cancer,
 - have had breast cancer before,
 - begin menopause at a late age (more than 55 years old),
 - have had their first child at a late age (more than 30 years old), and
 - are 30 years old and have never had a child
- However, 50-75% of breast cancer cases continue to occur in women without any of the known risk factors.

Early Recognition And Survival

- Very high (five, eight and ten year) survival rates were observed in women with breast cancer who were diagnosed through the Breast Cancer Detection Demonstration Project from 1973 to 1985. The American Cancer Society concluded that early detection of breast cancer is effective for women in their 40s and older.

Massachusetts Physician Survey

- A majority of Massachusetts physicians surveyed reported that they always recommend mammography to their patients over 40 years of age.
- 29% of Massachusetts physicians surveyed reported that their patients frequently request mammograms; 47% reported that their patients sometimes request them.
- According to 69% of Massachusetts physicians surveyed, requests for mammography have increased among their patients over the past five years.

Mammography Use Among Massachusetts Women

- Mammography has been shown to help in reducing breast cancer mortality. Nevertheless utilization is still relatively low.
- According to the 1988 Massachusetts Health Interview Survey, over one third of Massachusetts women over age 40 have never had a mammogram (Figure 2).
- Women with household incomes less than \$15,000 were less likely to have ever had a mammogram (Figure 3).

Figure 2.

Mammography Use Among Women 40 and Older, By Age

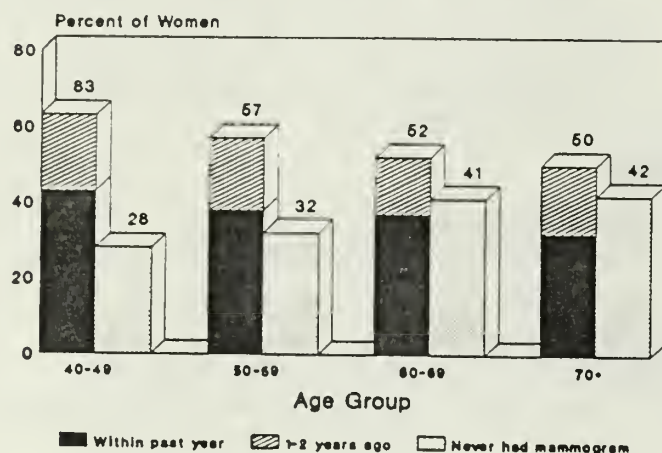
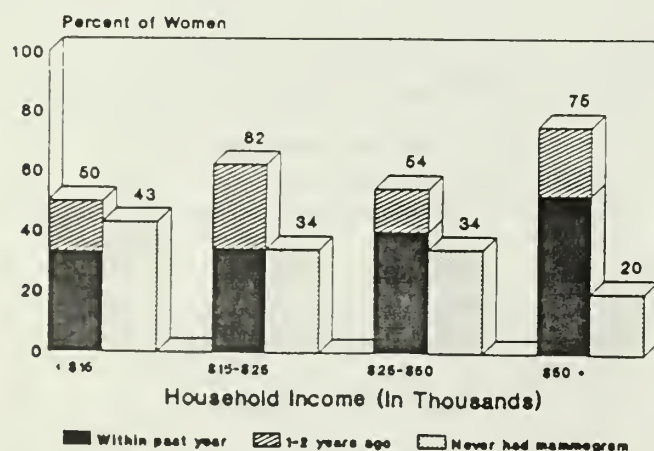


Figure 3.

Mammography Use Among Women 40 and Older, By Income



- The major reasons reported for not having had a mammogram were that they felt it was unnecessary (31%) and they had not received a recommendation from their doctor (25%).

- Cost has also been cited as a deterrent to mammography use. However, private insurers and HMOs now cover the cost of mammography screening in Massachusetts, and Medicare also covers mammography screening for the disabled and women 65 and older.

Mammography Guidelines

For women who have had breast cancer:

- every year

For all other women:

- Baseline at age 35 to 39
- Every 1 to 2 years at age 40 to 49
- Every year at age 50 and over

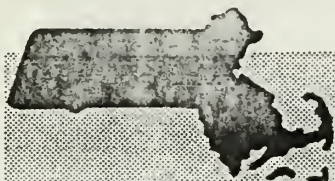
You Can Make The Difference

- Routinely order mammography as stated in guidelines.
- Teach patients to do monthly breast self-examinations. The American Cancer Society (ACS) will certify your office staff to do this.
- Perform clinical breast examinations on all female patients during periodic examinations.
- Distribute literature about early detection of breast cancer and mammography (free from the ACS and the National Cancer Institute).

For Your Information

Call for free professional and patient education materials.

- American Cancer Society
Massachusetts Division
1-800-ACS-2345
- National Cancer Institute
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- The Massachusetts Dept. of Public Health
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(617) 727-2662



SPOTLIGHT on Massachusetts Information for Primary Care Physicians

Childhood Cancer

- While cancer has not been studied as extensively in children as in adults, many types of childhood cancer are believed to be familial or genetic in origin, and develop in ways that are considerably different from adults.

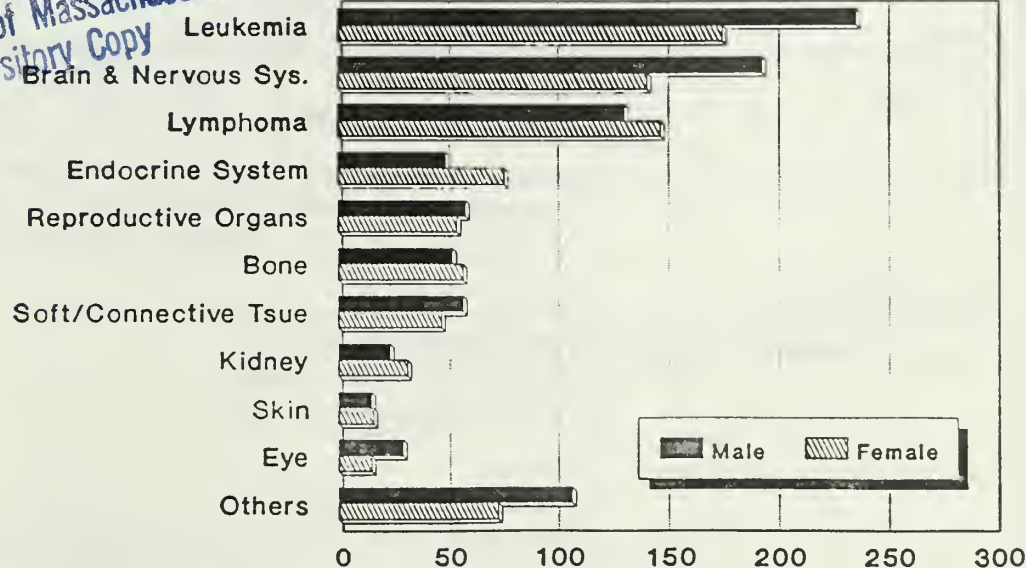
- Because childhood cancers are rare, screening tests are not useful. However, for familial cancers such as cancer of the eye (retinoblastoma), kidney (renal cell carcinoma) and bowel, family history plays an important part in early diagnosis.

- Other than leukemia and lymphoma, childhood cancers are frequently sarcomas, growths that occur in connective tissue such as muscle or bone. Because cancers in children are generally deep-seated, diagnosis is often accidental or occurs at a late stage.

Incidence in Massachusetts

- The average annual incidence rate for childhood cancer for 1982 through 1988 was 15.2 per 100,000 children in Massachusetts and 15.8 per 100,000 nationwide.
- During this time, approximately 260 cases of childhood cancer were diagnosed each year in Massachusetts. Leukemia was the most common cancer in children aged 0 to 19, accounting for 22.9% of all new cases, followed by cancers of the brain and nervous system (18.7%) and lymphomas (15.5%). Cancers of the endocrine system, bone and connective tissue, kidney, and eye accounted for an additional 25% of cancer among Massachusetts children.

Incidence of Selected Childhood Cancer Massachusetts, 1982-1988



Total number of cases = 1,801 (Male = 960, Female = 841)

Source: MDPH, Bureau of Health Statistics, Massachusetts Cancer Registry.

Incidence in Massachusetts (continued)

- Incidence varies by age for different types of cancer. The incidence of leukemia and cancers of the brain and nervous system are higher among children less than 10 years of age. Among teenagers aged 15 to 19, lymphoma occurs more frequently.
- National data from SEER indicate that the incidence of cancer in children is slowly increasing. This trend is most evident for brain and nervous system tumors and acute lymphocytic leukemia.

Mortality in Massachusetts

- Cancer is the second leading cause of death (following unintentional injuries) among children (aged 1 to 19) in the United States as well as in Massachusetts.
- The average annual mortality rate for childhood cancer is 3.3 deaths per 100,000

children aged 0 to 19 in Massachusetts (1982-1988) and 3.8 per 100,000 nationwide (1984-1988).

- From 1982 through 1988, childhood cancer accounted for 388 deaths (4.4% of the total) among Massachusetts children aged 0-19. Of these deaths, 38% were due to leukemia, the leading cause of cancer deaths.

For Your Information

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- Massachusetts Division
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Cancer Information Service
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- The Massachusetts Department of Public Health (MDPH) Cancer Control Program
(617) 727-2662

Risk Factors

Cancer	Risk Factor(s)
Leukemia	Genetic disorders Chromosomal disorders
Brain	Long-term exposure to pesticide use on farms Viruses in infected pets or farm animals Ionizing radiation (e.g., X-rays as treatment for tinea capitis)
Nervous System	Genetic disorders
Hodgkin's Disease	Familial predisposition Exposure to certain viruses Higher socioeconomic status
Non-Hodgkin's Lymphoma	Viruses Congenital abnormalities Immunosuppression from medical treatment or kidney transplant
Burkitt's Lymphoma	Linked with exposure to Epstein-Barr virus

Data provided by the Massachusetts Cancer Registry and MDPH Bureau of Health Statistics, Chronic Disease Surveillance Unit.

Reference: Childhood Cancer in Massachusetts, 1982-1986. Bureau of Health Statistics, Research and Evaluation, December 1989.



SPOTLIGHT on Massachusetts Information for Primary Care Physicians

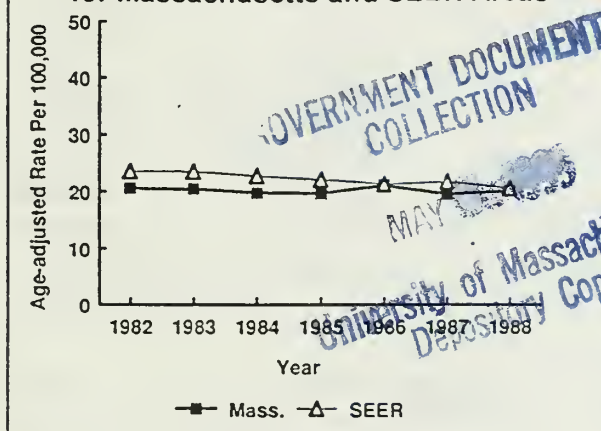
OB/GYN Cancers

Incidence in Massachusetts

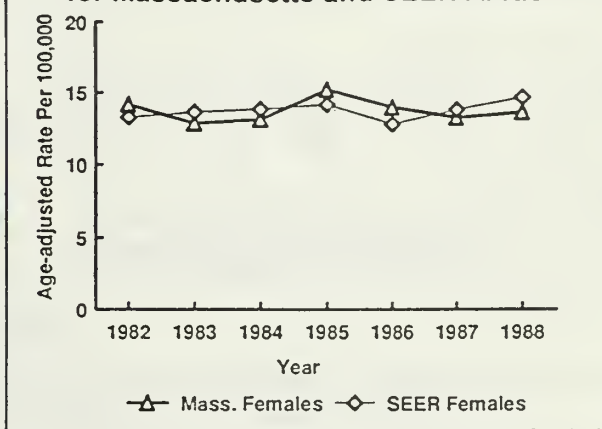
Uterine Cancer Among Massachusetts women from 1982 through 1988, cancer of the corpus uteri was the fourth most frequently diagnosed type of cancer. While national data shows a steady decline in incidence rate during this period, uterine cancer among Massachusetts women was fairly constant from 1982 through 1985, increased in 1986, declined in 1987, and rose slightly in 1988.

Ovarian Cancer A sharp increase in the rate of ovarian cancers was reported for Massachusetts women during 1985, with a slight decline since that time. Unfortunately, a slight increase was reported in 1988. These rates vary by approximately 3% (plus or minus) of national data.

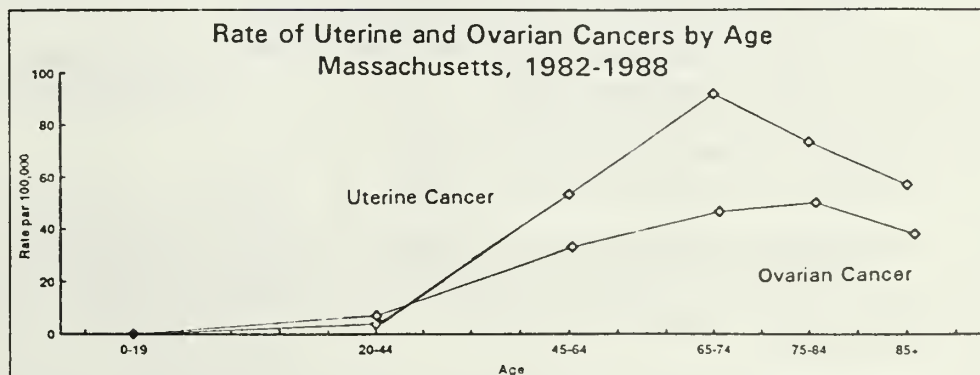
**Uterine Cancer Incidence Trends 1982-1988
for Massachusetts and SEER Areas**



**Ovarian Cancer Incidence Trends 1982-1988
for Massachusetts and SEER Areas**



- The incidence of both cancers of the uterus and ovary rises steadily with age. While the peak incidence of uterine cancer occurs in women between the ages of 65-74, the incidence of ovarian cancer peaks in women in the 75-84 age group.



Risk Factors

Type	Risk Factor(s)
Cancers of the Uterine Cervix	Early age at first intercourse Multiple sex partners Cigarette smoking Sexually transmitted diseases: Human Papilloma Virus (genital warts) Herpes Simplex Type 2
Endometrial Cancers	History of infertility Failure to ovulate Prolonged Estrogen Replacement Therapy Obesity
Ovarian Cancers	Age over 60 Never had children Prior breast cancer Age 25+ and mother, sister, or daughter with ovarian cancer Age 25+ and more than one relative (any relation) with ovarian cancer

Early Detection Guidelines

Cervical Cancer:

- Pap Smear after age 18 or when sexual activity begins
- Bimanual pelvic inspection

Endometrial Cancer:

- For high-risk patients, endometrial evaluation at menopause

Ovarian Cancer:

- Thorough annual pelvic exam after age 40
- For high-risk patients, blood test including CA 125, and high resolution vaginal probe ultrasound

You Can Make the Difference

- Advise patients who are sexually active to use condoms to protect against the transmission of STDs.
- Advise patients to report any unusual discharge, bleeding between periods, enlargement of the abdomen (caused by the accumulation of fluid), or vague digestive disturbances (of women over the age of 40).
- Advise patients to quit smoking.
- Include risk factor assessment as part of routine exams.

Pap Smears

- Use of the Bethesda System for Reporting Cervical/Vaginal Cytological Diagnosis is recommended by the National Cancer Institute. The Bethesda System includes:
 1. a statement on adequacy of the specimen for diagnostic evaluation
 2. a general categorization of the diagnosis ('within normal limits' or 'other')
 3. the descriptive diagnosis.

For Your Information

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- The National Cancer Institute
Cancer Information Service
1-800-4-CANCER
- The Massachusetts Department of Public Health (MDPH) Cancer Control Program
(617) 727-2662

References:

1. Cancer Facts and Figures-1992; American Cancer Society publication no. 92-425M-No. 5008.92-LE
2. Cancer Incidence in Massachusetts:1982-1988; Mass. Dept. of Public Health, Bureau of Health Statistics, 1991
3. Cervical Cancer Control: Status and Directions; NIH Publication No. 91-3223, NCI, Sept. 1991
4. NCI Workshop, "The 1988 Bethesda System for Reporting Cervical/Vaginal Cytological Diagnoses", JAMA, Vol. 262, No. 7, Aug 18, 1989, p. 931-934.



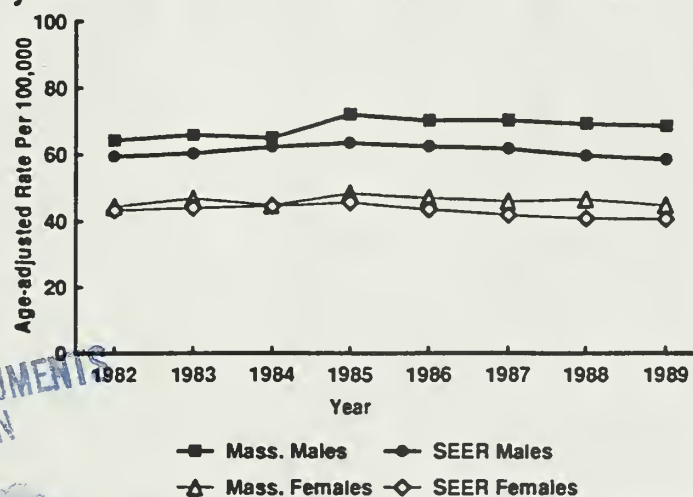
SPOTLIGHT on Massachusetts Information for Primary Care Physicians

Colorectal Cancer

Incidence in Massachusetts

- 32,203 new cases of colorectal cancer (15,665 in men and 16,538 in women) were reported from 1982 through 1989.
- The average annual age-adjusted incidence rates in Massachusetts for 1982 through 1989 were 67.6 per 100,000 for men and 45.8 per 100,000 for women.
- During this time, the incidence of colorectal cancer remained constant among men and women. It was the third most common cancer diagnosed in men and second most common cancer in women.
- Ninety percent of cases occur in persons 40 or older, with peak incidence between ages 65 and 74. It is the most frequently occurring cancer in people over 75.

Colo-rectal Cancer Incidence Trends 1982-1989
by Gender for Massachusetts and SEER Areas

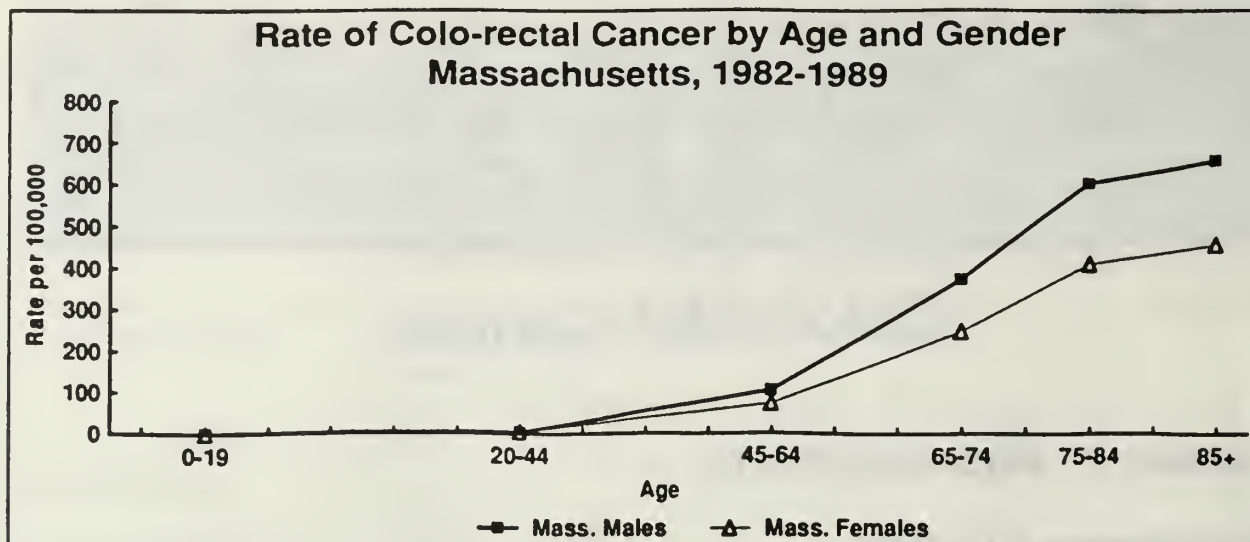


• SEER=National Cancer Institutes Surveillance, Epidemiology, End Results Program (national cancer incidence database)

Source: Cancer Incidence in Massachusetts 1982-1989, Bureau of Health Statistics, Research and Evaluation, Massachusetts Department of Public Health, 1992.

Risk Factors

- Individuals with a personal or family history of colorectal cancer, polyps, Gardner's Syndrome or inflammatory bowel diseases such as ulcerative colitis or Crohn's Disease are at high risk for colorectal cancer.
- Population studies have also associated a high-fat, high-protein and low-fiber diet to increased risk of this disease.



Source: **Cancer Incidence in Massachusetts 1982-1989**, Bureau of Health Statistics, Research and Evaluation, Massachusetts Department of Public Health, 1992.

You Can Make the Difference

- There are three common procedures for screening individuals for colorectal cancer:
 - digital rectal examination
 - stool blood test
 - proctosigmoidoscopy (procto) examination
- The National Cancer Institute and American Cancer Society have recommended that clinicians screen individuals **without symptoms** at the following intervals:
 - a digital rectal examination every year for patients over age 40
 - a stool blood test every year for patients over 50
 - a procto every 3 to 5 years for patients after age 50
- Examination of high risk individuals should begin at an early age, perhaps as early as age 20.

For Your Information

- Call for free professional and patient education materials

**American Cancer Society,
Massachusetts Division**
1-800-ACS-2345

National Cancer Institute's
Cancer Information Service
1-800-4-CANCER

Massachusetts Department of
Public Health's
**Bureau of Family and
Community Health
Cancer Control Program**
(617) 727-1246 or 727-0944

References:

1. **Cancer Incidence in Massachusetts 1982-1989**, Bureau of Health Statistics, Research and Evaluation, Massachusetts Department of Public Health, 1992.
1. **The American Cancer Society Cancer Book**, edited by Arthur I. Holleb, M.D., Doubleday and Co., 1986.